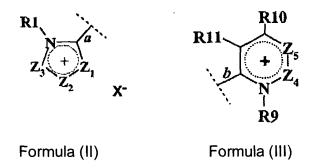
# WHAT IS CLAIMED IS:

1. A composition for dyeing human keratinous fibres comprising, in a cosmetically acceptable medium, at least one monocationic monoazo dye of formula (I):

$$W_1-N=N-W_2-NW_3-W_4-W_5$$
 (I)

### wherein:

-  $W_1$  is chosen from 5- and 6-membered cationic aromatic heterocycles of formulae (II) and (III):



### wherein:

- Z<sub>1</sub> is chosen from an oxygen atom, a sulphur atom, NR<sub>2</sub> radicals, and CR<sub>3</sub> radicals,
- $Z_2$  is chosen from a nitrogen atom and  $CR_4$  radicals,
- Z<sub>3</sub> is chosen from NR<sub>12</sub> radicals and CR<sub>13</sub> radicals,
- Z<sub>4</sub> is chosen from a nitrogen atom and CR<sub>14</sub> radicals,
- Z<sub>5</sub> is chosen from a nitrogen atom and CR<sub>15</sub> radicals,

with the proviso that formulae (II) and (III) do not comprise more than two adjacent heteroatoms;

- the bond **a** connects the 5-membered cationic ring of formula (II) to the azo functional group of formula (I),
- the bond **b** connects the 6-membered cationic ring of formula (III) to the azo functional group of formula (I),
- X<sup>-</sup> is chosen from organic and inorganic anions,
- $W_2$  and  $W_4$  (formula I), which may be identical or different, are chosen from divalent carbonaceous aromatic groups and pyridine groups of formulae (IV) and (V):

- $W_3$  is chosen from a hydrogen atom and  $C_1$ - $C_6$  alkyl radicals that may be optionally substituted with at least one radical chosen from hydroxyl radicals, alkoxy radicals, amino radicals, mono( $C_1$ - $C_4$ )alkylamino radicals, and di( $C_1$ - $C_4$ )alkylamino radicals,
- $_{-}$   $W_{5}$  is a 5-membered nitrogenous heteroaromatic radical connected to  $W_{4}$  via the nitrogen atom of the ring of the said heteroaromatic radical, wherein the heteroaromatic radical is chosen from pyrazolyl, pyrrolyl, imidazolyl, triazolyl, and thiadiazolyl radicals, it

being possible for each of these heteroaromatic radicals to be substituted by at least one entity chosen from hydrogen, chlorine, and fluorine atoms,  $C_1$ - $C_6$  alkyl radicals optionally substituted by at least one radical chosen from hydroxyl,  $C_1$ - $C_4$  alkoxy,  $C_2$ - $C_4$  (poly)hydroxyalkoxy, amino, (di)( $C_1$ - $C_4$ )alkylamino,  $C_2$ - $C_4$  (poly)hydroxyalkylamino, carboxyl, sulpho,  $C_1$ - $C_4$  alkoxycarbonyl, and  $C_1$ - $C_4$  alkylthio radicals; and at least one phenyl radical, which may be optionally substituted by at least one entity chosen from halogen atoms and hydroxyl,  $C_1$ - $C_2$  alkoxy, amino, (di)( $C_1$ - $C_2$ )alkylamino, carboxyl, sulpho,  $C_1$ - $C_4$  alkyl, and  $C_1$ - $C_2$  alkylthio radicals,

- $R_1$ ,  $R_2$ ,  $R_9$  and  $R_{12}$ , which may be identical or different, are chosen from phenyl radicals that may be optionally substituted and  $C_1$ - $C_8$  alkyl radicals that may be optionally substituted by at least one radical chosen from hydroxyl,  $C_1$ - $C_2$  alkoxy,  $C_2$ - $C_4$  (poly)hydroxyalkoxy, amino, and (di)( $C_1$ - $C_2$ )alkylamino radicals,
- R<sub>5</sub>, R<sub>6</sub>, R<sub>7</sub> and R<sub>8</sub>, which may be identical or different, are chosen from a hydrogen atom; a chlorine atom; a bromine atom; linear and branched, saturated and unsaturated C<sub>1</sub>-C<sub>8</sub> hydrocarbonaceous chains that can form at least one 3- to 6-membered carbonaceous ring, at least one carbon atom of the carbonaceous chain of which can be replaced by at least one entity chosen from oxygen, nitrogen, and sulphur atoms and SO<sub>2</sub> groups, and the carbon atoms of which can, independently of one another, be substituted by at least one halogen atom; with the proviso that R<sub>5</sub>, R<sub>6</sub>, R<sub>7</sub> and R<sub>8</sub> do not comprise a peroxide bond or a diazo or nitroso radical,

- R<sub>3</sub>, R<sub>4</sub>, R<sub>10</sub>, R<sub>11</sub>, R<sub>13</sub>, R<sub>14</sub> and R<sub>15</sub>, which may be identical or different, are chosen from a hydrogen atom and linear and branched, saturated and unsaturated C<sub>1</sub>-C<sub>16</sub> hydrocarbonaceous chains that can form at least one 3- to 6-membered carbonaceous ring, one or more carbon atoms of the carbonaceous chain of which can be replaced by at least one entity chosen from oxygen, nitrogen, and sulphur atoms, and SO<sub>2</sub> groups, and the carbon atoms of which can, independently of one another, be substituted by at least one halogen atom; with the proviso that R<sub>3</sub>, R<sub>4</sub>, R<sub>10</sub>, R<sub>11</sub>, R<sub>13</sub>, R<sub>14</sub> and R<sub>15</sub> do not comprise a peroxide bond or a diazo or nitroso radical,
  - R<sub>4</sub> with R<sub>13</sub> and R<sub>14</sub> with R<sub>15</sub> can form a carbonaceous aromatic ring.
- 2. The composition according to Claim 1, wherein the human keratinous fibers are human hair.
- 3. The composition according to Claim 1, wherein  $R_4$  with  $R_{13}$  and  $R_{14}$  with  $R_{15}$  form a phenyl ring.
- 4. The composition according to Claim 1, wherein  $W_3$  (formula I) is chosen from a hydrogen atom and  $C_1$ - $C_4$  alkyl radicals that may be optionally substituted with at least one radical chosen from hydroxyl,  $C_1$ - $C_2$  alkoxy, amino, and (di)( $C_1$ - $C_2$ )alkylamino radicals.
- 5. The composition according to Claim 4, wherein  $W_3$  (formula I) is chosen from a hydrogen atom and methyl, ethyl, and 2-hydroxyethyl radicals.
- 6. The composition according to Claim 5, wherein  $W_3$  (formula I) is a hydrogen atom.
- 7. The composition according to Claim 1, wherein  $W_5$  (formula I) is chosen from pyrazolyl, pyrrolyl, and imidazolyl rings.

- 8. The composition according to Claim 7, wherein  $W_5$  (formula I) is chosen from pyrrolyl and imidazolyl rings.
- 9. The composition according to Claim 8, wherein  $W_5$  (formula I) is a 5-membered nitrogenous heteroaromatic ring substituted with at least one radical chosen from  $C_1$ - $C_6$  alkyl radicals that may be optionally substituted by at least one entity chosen from hydroxyl,  $C_1$ - $C_4$  alkoxy, amino,  $C_1$ - $C_4$  monoalkylamino,  $C_1$ - $C_4$  alcoxycarbonyl and  $di(C_1$ - $C_4$ )alkylamino radicals; chlorine and fluorine atoms; phenyl radicals that may be optionally substituted with at least one entity chosen from a bromine atom, a chlorine atom, and hydroxyl,  $C_1$ - $C_2$  alkoxy, amino,  $(di)(C_1$ - $C_2$ )alkylamino,  $di(C_1$ - $C_2$ )alkylamino, and  $C_1$ - $C_2$  alkoxy radicals.
- 10. The composition according to Claim 8, wherein  $W_5$  (formula I) is chosen from pyrrolyl and imidazolyl radicals optionally substituted with one or two radicals chosen from methyl, ethyl, propyl, phenyl, 4-chlorophenyl and ethoxycarbonyl radicals.
- 11. The composition according to Claim 1, wherein  $R_1$ ,  $R_2$ ,  $R_9$  and  $R_{12}$ , which may be identical or different, are chosen from  $C_1$ - $C_4$  alkyl radicals optionally substituted with at least one radical chosen from hydroxyl,  $C_1$ - $C_2$  alkoxy, amino, and  $(di)(C_1$ - $C_2)$ alkylamino radicals.
- 12. The composition according to Claim 11, wherein  $R_1$ ,  $R_2$ ,  $R_9$  and  $R_{12}$ , which may be identical or different, are chosen from methyl, ethyl, propyl, and 2-hydroxyethyl radicals.
- 13. The composition according to Claim 1, wherein R<sub>5</sub>, R<sub>6</sub>, R<sub>7</sub> and R<sub>8</sub>, which may be identical or different, are chosen from a hydrogen atom and methyl, ethyl, isopropyl, methoxymethyl, hydroxymethyl, 1-carboxymethyl, 1-aminomethyl, 2-carboxyethyl, 2-hydroxyethyl, 3-hydroxypropyl, 1,2-dihydroxyethyl, 1-hydroxy-2-aminoethyl,

2-hydroxy-1-aminoethyl, methoxy, ethoxy, 2-hydroxyethyloxy, and 2-aminoethyloxy radicals.

- 14. The composition according to Claim 13, wherein  $R_5$ ,  $R_6$ ,  $R_7$  and  $R_8$ , which may be identical or different, are chosen from a hydrogen atom and methyl, hydroxymethyl, 2-hydroxyethyl, 1,2-dihydroxyethyl, methoxy, and 2-hydroxyethyloxy radicals.
- 15. The composition according to Claim 14, wherein  $R_5$ ,  $R_6$ ,  $R_7$  and  $R_8$ , which may be identical or different, are chosen from a hydrogen atom, methyl radicals and methoxy radicals.
- 16. The composition according to Claim 1, wherein R<sub>3</sub>, R<sub>4</sub>, R<sub>10</sub>, R<sub>11</sub>, R<sub>13</sub>, R<sub>14</sub> and R<sub>15</sub>, which may be identical or different, are chosen from hydrogen atoms; linear and branched C<sub>1</sub>-C<sub>4</sub> alkyl radicals optionally substituted by at least one radical chosen from hydroxyl, C<sub>1</sub>-C<sub>2</sub> alkoxy, C<sub>2</sub>-C<sub>4</sub> (poly)hydroxyalkoxy, amino and (di)(C<sub>1</sub>-C<sub>2</sub>)alkylamino radicals; phenyl radicals optionally substituted by at least one entity chosen from hydroxyl, C<sub>1</sub>-C<sub>2</sub> alkoxy, C<sub>2</sub>-C<sub>4</sub> (poly)hydroxyalkoxy, amino and (di)(C<sub>1</sub>-C<sub>2</sub>)alkylamino radicals, and halogen atoms; sulphonylamino radicals; C<sub>1</sub>-C<sub>2</sub> alkoxy radicals; C<sub>2</sub>-C<sub>4</sub> (poly)hydroxyalkoxy radicals; amino radicals; (di)(C<sub>1</sub>-C<sub>2</sub>)alkylamino radicals; and C<sub>2</sub>-C<sub>4</sub> (poly)hydroxyalkylamino radicals.
- 17. The composition according to Claim 16, wherein the halogen atoms are chosen from chlorine, fluorine and bromine atoms.
- 18. The composition according to Claim 16, wherein  $R_3$ ,  $R_4$ ,  $R_{10}$ ,  $R_{11}$ ,  $R_{13}$ ,  $R_{14}$  and  $R_{15}$ , which may be identical or different, are chosen from a hydrogen atom;  $C_1$ - $C_4$  alkyl radicals optionally substituted by at least one radical chosen from hydroxyl, amino and

(di)( $C_1$ - $C_2$ )alkylamino radicals;  $C_1$ - $C_2$  alkoxy radicals; amino radicals; (di)( $C_1$ - $C_2$ )alkylamino radicals; and  $C_2$ - $C_4$  (poly)hydroxyalkylamino radicals.

- 19. The composition according to Claim 18, wherein R<sub>3</sub>, R<sub>4</sub>, R<sub>10</sub>, R<sub>11</sub>, R<sub>13</sub>, R<sub>14</sub> and R<sub>15</sub>, which may be identical or different, are chosen from a hydrogen atom and methyl, phenyl, 2-hydroxymethyl, methoxy, ethoxy, 2-hydroxyethyloxy, amino, methylamino, dimethylamino and 2-hydroxyethylamino radicals.
- 20. The composition according to Claim 1, wherein  $Z_1$  (formula (II)) is chosen from NR<sub>2</sub> radicals.
- 21. The composition according to Claim 1, wherein  $Z_2$  (formula (II)) is chosen from  $CR_4$  radicals.
- 22. The composition according to claim 1, wherein  $Z_3$  (formula (II)) is chosen from  $CR_{13}$  radicals.
- 23. The composition according to Claim 1, wherein  $Z_4$  (formula (III)) is chosen from  $CR_{14}$  radicals.
- 24. The composition according to Claim 1, wherein  $Z_5$  (formula (III)) is chosen from  $CR_{15}$ .
- 25. The composition according to Claim 1, wherein the monocationic monoazo dye of formula (I) is chosen from:
- 2-(4-amino-N-(4-(N-pyrrolophenyl))phenylazo)-1,3-dimethyl-3H-imidazol-1-ium,
- 2-(4-amino-N-(4-(N-(2,5-di-methyl)pyrrolophenyl))phenylazo)-1,3-dimethyl-3H-imidazol-1-ium,
- 2-(4-amino-N-(4-(N-(2-methyl-5-propyl)pyrrolophenyl))phenylazo)-1,3-dimethyl-3H-imidazol-1-ium,

- 2-(4-amino-N-(4-(N-(2-methyl-5-phenyl))pyrrolophenyl))phenylazo)-1,3-dimethyl-3H-imidazol-1-ium, and
- 2-(4-amino-N-(4-(N-[2-methyl-3-carboxyethyl-5-(4-chlorophenyl)pyrrolophenyl)]phenylazo)-1,3-dimethyl-3H-imidazol-1-ium,

wherein each of these dyes is associated with at least one X<sup>-</sup> anion.

- 26. The composition according to Claim 1, wherein  $X^-$  is chosen from halides, hydroxides, sulphates, hydrogensulphates,  $(C_1-C_6)$ alkyl sulphates, acetates, tartrates, oxalates,  $(C_1-C_6)$ alkylsulphonates and arylsulphonates, which are optionally substituted by at least one  $C_1-C_4$  alkyl radical.
- 27. The composition according to Claim 1, wherein the monocationic monoazo dye of formula (I) is present in an amount ranging from 0.001 to 5% by weight, relative to the total weight of the dyeing composition.
- 28. The composition according to Claim 27, wherein the monocationic monoazo dye of formula (I) is present in an amount ranging from 0.05 to 2% by weight, relative to the total weight of the composition.
- 29. The composition according to Claims 1, further comprising at least one direct dye other than those of formula (I), wherein said at least one direct dye is chosen from neutral, acidic and cationic direct nitrobenzene dyes; neutral, acidic and cationic direct azo dyes; neutral, acidic and cationic direct quinone dyes; direct azine dyes; direct methine dyes; direct triarylmethane dyes, direct indoamine dyes, and direct natural dyes.
- 30. The composition according to Claim 29, wherein the cationic direct quinone dyes are chosen from anthraquinone dyes.
- 31. The composition according to Claim 1, further comprising at least one oxidizing agent.

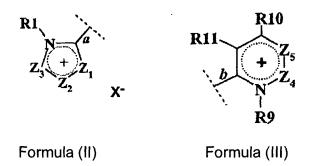
- 32. The composition according to Claim 1, wherein the at least one oxidizing agent is hydrogen peroxide.
- 33. The composition according to Claim 1, further comprising at least one oxidation base.
- 34. The composition according to Claim 33, wherein the at least one oxidation base is chosen from para-phenylenediamines, bisphenylalkylenediamines, para-aminophenols, ortho-aminophenols, heterocyclic bases and their addition salts with an acid.
- 35. The composition according to Claim 33, further comprising at least one coupler.
- 36. The composition according to Claim 35, wherein the at least one coupler is chosen from meta-phenylene-diamines, meta-aminophenols, meta-diphenols, naphthalene couplers, heterocyclic couplers and their addition salts with an acid.
- 37. The composition according to Claim 1, wherein R<sub>3</sub>, R<sub>4</sub>, R<sub>10</sub>, R<sub>11</sub>, R<sub>13</sub>, R<sub>14</sub> and R<sub>15</sub>, which may be identical or different, are chosen from hydrogen atoms; linear and branched C<sub>1</sub>-C<sub>8</sub> alkyl radicals optionally substituted by at least one radical chosen from hydroxyl, C<sub>1</sub>-C<sub>2</sub> alkoxy, C<sub>2</sub>-C<sub>4</sub> (poly)hydroxyalkoxy, amino and (di)(C<sub>1</sub>-C<sub>2</sub>)alkylamino radicals; phenyl radicals optionally substituted by at least one entity chosen from hydroxyl, C<sub>1</sub>-C<sub>2</sub> alkoxy, C<sub>2</sub>-C<sub>4</sub> (poly)hydroxyalkoxy, amino and (di)(C<sub>1</sub>-C<sub>2</sub>)alkylamino radicals, and halogen atoms; sulphonylamino radicals; C<sub>1</sub>-C<sub>2</sub> alkoxy radicals; C<sub>2</sub>-C<sub>4</sub> (poly)hydroxyalkoxy radicals; amino radicals; (di)(C<sub>1</sub>-C<sub>2</sub>)alkylamino radicals; and C<sub>2</sub>-C<sub>4</sub> (poly)hydroxyalkylamino radicals.
- 38. The composition according to Claim 1, wherein if  $W_5$  is imidazole,  $W_1$  is benzimidazole, and  $W_4$  is phenyl, then  $W_3$  not hydrogen.

39. A process for the direct dyeing of human keratinous fibres, comprising applying to the fibres a composition comprising, in a cosmetically acceptable medium, at least one monocationic monoazo dye of formula (I):

$$W_1-N=N-W_2-NW_3-W_4-W_5$$
 (I)

### wherein:

-  $W_1$  is chosen from 5- and 6-membered cationic aromatic heterocycles of formulae (II) and (III):



### wherein:

- Z<sub>1</sub> is chosen from an oxygen atom, a sulphur atom, NR<sub>2</sub> radicals, and CR<sub>3</sub> radicals,
- Z<sub>2</sub> is chosen from a nitrogen atom and CR<sub>4</sub> radicals,
- Z<sub>3</sub> is chosen from NR<sub>12</sub> radicals and CR<sub>13</sub> radicals,
- Z<sub>4</sub> is chosen from a nitrogen atom and CR<sub>14</sub> radicals,
- Z<sub>5</sub> is chosen from a nitrogen atom and CR<sub>15</sub> radicals,

with the proviso that formulae (II) and (III) do not comprise more than two adjacent heteroatoms:

- the bond a connects the 5-membered cationic ring of formula (II) to the azo functional group of formula (I),
- the bond **b** connects the 6-membered cationic ring of formula (III) to the azo functional group of formula (I),
- X is chosen from organic and inorganic anions,
- $W_2$  and  $W_4$  (formula I), which may be identical or different, are chosen from divalent carbonaceous aromatic groups and pyridine groups of formulae (IV) and (V):

- $W_3$  is chosen from a hydrogen atom and  $C_1$ - $C_6$  alkyl radicals that may be optionally substituted with at least one radical chosen from hydroxyl radicals, alkoxy radicals, amino radicals, mono( $C_1$ - $C_4$ )alkylamino radicals, and di( $C_1$ - $C_4$ )alkylamino radicals,
- $W_5$  is a 5-membered nitrogenous heteroaromatic radical connected to  $W_4$  via the nitrogen atom of the ring of the said heteroaromatic radical, wherein the heteroaromatic radicals are chosen from pyrazolyl, pyrrolyl, imidazolyl, triazolyl, and thiadiazolyl radicals, it

being possible for each of these heteroaromatic radicals to be substituted by at least one entity chosen from hydrogen, chlorine, and fluorine atoms,  $C_1$ - $C_6$  alkyl radicals optionally substituted by at least one radical chosen from hydroxyl,  $C_1$ - $C_4$  alkoxy,  $C_2$ - $C_4$  (poly)hydroxyalkoxy, amino, (di)( $C_1$ - $C_4$ )alkylamino,  $C_2$ - $C_4$  (poly)hydroxyalkylamino, carboxyl, sulpho,  $C_1$ - $C_4$  alkoxycarbonyl, and  $C_1$ - $C_4$  alkylthio radicals; and at least one phenyl radical, which may be optionally substituted by at least one entity chosen from halogen atoms and hydroxyl,  $C_1$ - $C_2$  alkoxy, amino, (di)( $C_1$ - $C_2$ )alkylamino, carboxyl, sulpho,  $C_1$ - $C_4$  alkyl, and  $C_1$ - $C_2$  alkylthio radicals,

- $R_1$ ,  $R_2$ ,  $R_9$  and  $R_{12}$ , which may be identical or different, are chosen from phenyl radicals that may be optionally substituted and  $C_1$ - $C_8$  alkyl radicals that may be optionally substituted by at least one radical chosen from hydroxyl,  $C_1$ - $C_2$  alkoxy,  $C_2$ - $C_4$  (poly)hydroxyalkoxy, amino, and (di)( $C_1$ - $C_2$ )alkylamino radicals,
- R<sub>5</sub>, R<sub>6</sub>, R<sub>7</sub> and R<sub>8</sub>, which may be identical or different, are chosen from a hydrogen atom; a chlorine atom; a bromine atom; linear and branched, saturated and unsaturated C<sub>1</sub>-C<sub>8</sub> hydrocarbonaceous chains that can form at least one 3- to 6-membered carbonaceous ring, at least one carbon atom of the carbonaceous chain of which can be replaced by at least one entity chosen from oxygen, nitrogen, and sulphur atoms and SO<sub>2</sub> groups, and the carbon atoms of which can, independently of one another, be substituted by at least one halogen atom; with the proviso that R<sub>5</sub>, R<sub>6</sub>, R<sub>7</sub> and R<sub>8</sub> do not comprise a peroxide bond or a diazo or nitroso radical,

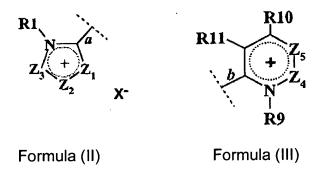
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- R<sub>3</sub>, R<sub>4</sub>, R<sub>10</sub>, R<sub>11</sub>, R<sub>13</sub>, R<sub>14</sub> and R<sub>15</sub>, which may be identical or different, are chosen from a hydrogen atom and linear and branched, saturated and unsaturated C<sub>1</sub>-C<sub>16</sub> hydrocarbonaceous chains that can form at least one 3- to 6-membered carbonaceous ring, one or more carbon atoms of the carbonaceous chain of which can be replaced by at least one entity chosen from oxygen, nitrogen, and sulphur atoms, and SO<sub>2</sub> groups, and the carbon atoms of which can, independently of one another, be substituted by at least one halogen atom; with the proviso that R<sub>3</sub>, R<sub>4</sub>, R<sub>10</sub>, R<sub>11</sub>, R<sub>13</sub>, R<sub>14</sub> and R<sub>15</sub> do not comprise a peroxide bond or diazo or nitroso radicals,
  - R<sub>4</sub> with R<sub>13</sub> and R<sub>14</sub> with R<sub>15</sub> can form a carbonaceous aromatic ring.
- 40. The process according to Claim 39, wherein the human keratinous fibers are hair.
- 41. The process according to Claim 39, wherein the dyeing composition comprises at least one oxidizing agent.
- 42. The process according to Claim 41, wherein the at least one oxidizing agent is mixed at the time of use with the dyeing composition.
- 43. The process according to Claim 41, wherein the at least one oxidizing agent is applied to the fibres in the form of an oxidizing composition, simultaneously with, or sequentially to, the dyeing composition.
- 44. The process according to Claim 39, wherein if  $W_5$  is imidazole,  $W_1$  is benzimidazole, and  $W_4$  is phenyl, then  $W_3$  is not hydrogen.
- 45. A monocationic monoazo compound chosen from compounds of formula (I):

$$W_1-N=N-W_2-NW_3-W_4-W_5$$
 (1)

#### wherein:

- W<sub>1</sub> is chosen from 5- and 6-membered cationic aromatic heterocycles of formulae (II) and (III):



## wherein:

- $Z_1$  is chosen from an oxygen atom, a sulphur atom, NR<sub>2</sub> radicals, and CR<sub>3</sub> radicals,
- Z<sub>2</sub> is chosen from a nitrogen atom and CR<sub>4</sub> radicals,
- Z<sub>3</sub> is chosen from NR<sub>12</sub> radicals and CR<sub>13</sub> radicals,
- Z<sub>4</sub> is chosen from a nitrogen atom and CR<sub>14</sub> radicals,
- Z<sub>5</sub> is chosen from a nitrogen atom and CR<sub>15</sub> radicals,

with the proviso that formulae (II) and (III) do not comprise more than two adjacent heteroatoms;

- the bond **a** connects the 5-membered cationic ring of formula (II) to the azo functional group of formula (I),
- the bond **b** connects the 6-membered cationic ring of formula (III) to the azo functional group of formula (I),

- X is chosen from organic and inorganic anions,
- W<sub>2</sub> and W<sub>4</sub> (formula I), which may be identical or different, are chosen from divalent carbonaceous aromatic groups and pyridine groups of formulae (IV) and (V):

- $W_3$  is chosen from a hydrogen atom and  $C_1$ - $C_6$  alkyl radicals that may be optionally substituted with at least one radical chosen from hydroxyl radicals, alkoxy radicals, amino radicals, mono( $C_1$ - $C_4$ )alkylamino radicals, and di( $C_1$ - $C_4$ )alkylamino radicals,
- $W_5$  is a 5-membered nitrogenous heteroaromatic radical connected to  $W_4$  via the nitrogen atom of the ring of the said heteroaromatic radical, wherein the heteroaromatic radicals are chosen from pyrazolyl, pyrrolyl, imidazolyl, triazolyl, and thiadiazolyl radicals, it being possible for each of these heteroaromatic radicals to be substituted by at least one entity chosen from hydrogen, chlorine, and fluorine atoms,  $C_1$ - $C_6$  alkyl radicals optionally substituted by at least one radical chosen from hydroxyl,  $C_1$ - $C_4$  alkoxy,  $C_2$ - $C_4$  (poly)hydroxyalkoxy, amino, (di)( $C_1$ - $C_4$ )alkylamino,  $C_2$ - $C_4$  (poly)hydroxyalkylamino, carboxyl, sulpho,  $C_1$ - $C_4$  alkoxycarbonyl, and  $C_1$ - $C_4$  alkylthio radicals; and at least one phenyl radical, which may be optionally substituted by at least one entity chosen from

halogen atoms and hydroxyl,  $C_1$ - $C_2$  alkoxy, amino, (di)( $C_1$ - $C_2$ )alkylamino, carboxyl, sulpho,  $C_1$ - $C_4$  alkyl, and  $C_1$ - $C_2$  alkylthio radicals,

- $R_1$ ,  $R_2$ ,  $R_9$  and  $R_{12}$ , which may be identical or different, are chosen from phenyl radicals that may be optionally substituted and  $C_1$ - $C_8$  alkyl radicals that may be optionally substituted by at least one radical chosen from hydroxyl,  $C_1$ - $C_2$  alkoxy,  $C_2$ - $C_4$  (poly)hydroxyalkoxy, amino, and (di)( $C_1$ - $C_2$ )alkylamino radicals,
- R<sub>5</sub>, R<sub>6</sub>, R<sub>7</sub> and R<sub>8</sub>, which may be identical or different, are chosen from a hydrogen atom; a chlorine atom; a bromine atom; linear and branched, saturated and unsaturated C<sub>1</sub>-C<sub>8</sub> hydrocarbonaceous chains that can form at least one 3- to 6-membered carbonaceous ring, at least one carbon atom of the carbonaceous chain of which can be replaced by at least one entity chosen from oxygen, nitrogen, and sulphur atoms and SO<sub>2</sub> groups, and the carbon atoms of which can, independently of one another, be substituted by at least one halogen atom; with the proviso that R<sub>5</sub>, R<sub>6</sub>, R<sub>7</sub> and R<sub>8</sub> do not comprise a peroxide bond or a diazo or nitroso radical,
- R<sub>3</sub>, R<sub>4</sub>, R<sub>10</sub>, R<sub>11</sub>, R<sub>13</sub>, R<sub>14</sub> and R<sub>15</sub>, which may be identical or different, are chosen from a hydrogen atom and linear and branched, saturated and unsaturated C<sub>1</sub>-C<sub>16</sub> hydrocarbonaceous chains that can form at least one 3- to 6-membered carbonaceous ring, one or more carbon atoms of the carbonaceous chain of which can be replaced by at least one entity chosen from oxygen, nitrogen, and sulphur atoms, and SO<sub>2</sub> groups, and the carbon atoms of which can, independently of one another, be substituted by at least

one halogen atom; with the proviso that  $R_3$ ,  $R_4$ ,  $R_{10}$ ,  $R_{11}$ ,  $R_{13}$ ,  $R_{14}$  and  $R_{15}$  do not comprise a peroxide bond or diazo or nitroso radicals,

 $R_4$  with  $R_{13}$  and  $R_{14}$  with  $R_{15}$  can form a carbonaceous aromatic ring.

- 46. The monocationic monoazo compound according to Claim 45, wherein  $R_3$ ,  $R_4$ ,  $R_{10}$ ,  $R_{11}$ ,  $R_{13}$ ,  $R_{14}$  and  $R_{15}$ , which may be identical or different, are chosen from hydrogen atoms; linear and branched  $C_1$ - $C_8$  alkyl radicals optionally substituted by at least one radical chosen from hydroxyl,  $C_1$ - $C_2$  alkoxy,  $C_2$ - $C_4$  (poly)hydroxyalkoxy, amino and  $(di)(C_1$ - $C_2)$ alkylamino radicals; phenyl radicals optionally substituted by at least one entity chosen from hydroxyl,  $C_1$ - $C_2$  alkoxy,  $C_2$ - $C_4$  (poly)hydroxyalkoxy, amino and  $(di)(C_1$ - $C_2)$ alkylamino radicals, and halogen atoms; sulphonylamino radicals;  $C_1$ - $C_2$  alkoxy radicals;  $C_2$ - $C_4$  (poly)hydroxyalkoxy radicals; amino radicals;  $(di)(C_1$ - $C_2)$ alkylamino radicals; and  $C_2$ - $C_4$  (poly)hydroxyalkylamino radicals.
- 47. A multi-compartment kit or device for the dyeing of human keratinous fibres, comprising:

at least one first compartment comprises a composition comprising, in a cosmetically acceptable medium,

at least one monocationic monoazo dye of formula (I):

$$W_1-N=N-W_2-NW_3-W_4-W_5$$
 (I)

wherein:

-  $W_1$  is chosen from 5- and 6-membered cationic aromatic heterocycles of formulae (II) and (III):

R1 
$$Z_3$$
  $Z_2$   $Z_4$   $Z_4$   $Z_4$   $Z_5$   $Z_4$  Formula (II)

### wherein:

- Z<sub>1</sub> is chosen from an oxygen atom, a sulphur atom, NR<sub>2</sub> radicals, and CR<sub>3</sub> radicals,
- Z<sub>2</sub> is chosen from a nitrogen atom and CR<sub>4</sub> radicals,
- Z<sub>3</sub> is chosen from NR<sub>12</sub> radicals and CR<sub>13</sub> radicals,
- Z<sub>4</sub> is chosen from a nitrogen atom and CR<sub>14</sub> radicals,
- Z<sub>5</sub> is chosen from a nitrogen atom and CR<sub>15</sub> radicals,

with the proviso that formulae (II) and (III) do not comprise more than two adjacent heteroatoms;

- the bond **a** connects the 5-membered cationic ring of formula (II) to the azo functional group of formula (I),
- the bond **b** connects the 6-membered cationic ring of formula (III) to the azo functional group of formula (I),

X is chosen from organic and inorganic anions,

-  $W_2$  and  $W_4$  (formula I), which may be identical or different, are chosen from divalent carbonaceous aromatic groups and pyridine groups of formulae (IV) and (V):

- $W_3$  is chosen from a hydrogen atom and  $C_1$ - $C_6$  alkyl radicals that may be optionally substituted with at least one radical chosen from hydroxyl radicals, alkoxy radicals, amino radicals, mono( $C_1$ - $C_4$ )alkylamino radicals, and di( $C_1$ - $C_4$ )alkylamino radicals,
- W<sub>5</sub> is a 5-membered nitrogenous heteroaromatic radical connected to W<sub>4</sub> via the nitrogen atom of the ring of the said heteroaromatic radical, wherein the heteroaromatic radicals are chosen from pyrazolyl, pyrrolyl, imidazolyl, triazolyl, and thiadiazolyl radicals, it being possible for each of these heteroaromatic radicals to be substituted by at least one entity chosen from hydrogen, chlorine, and fluorine atoms, C<sub>1</sub>-C<sub>6</sub> alkyl radicals optionally substituted by at least one radical chosen from hydroxyl, C<sub>1</sub>-C<sub>4</sub> alkoxy, C<sub>2</sub>-C<sub>4</sub> (poly)hydroxyalkoxy, amino, (di)(C<sub>1</sub>-C<sub>4</sub>)alkylamino, C<sub>2</sub>-C<sub>4</sub> (poly)hydroxyalkylamino, carboxyl, sulpho, C<sub>1</sub>-C<sub>4</sub> alkoxycarbonyl, and C<sub>1</sub>-C<sub>4</sub> alkylthio radicals; and at least one phenyl radical, which may be optionally substituted by at least one entity chosen from halogen atoms and hydroxyl, C<sub>1</sub>-C<sub>2</sub> alkoxy, amino, (di)(C<sub>1</sub>-C<sub>2</sub>)alkylamino, carboxyl, sulpho, C<sub>1</sub>-C<sub>4</sub> alkyl, and C<sub>1</sub>-C<sub>2</sub> alkylthio radicals,
- $R_1$ ,  $R_2$ ,  $R_9$  and  $R_{12}$ , which may be identical or different, are chosen from phenyl radicals that may be optionally substituted and  $C_1$ - $C_8$  alkyl radicals that may be optionally

substituted by at least one radical chosen from hydroxyl,  $C_1$ - $C_2$  alkoxy,  $C_2$ - $C_4$  (poly)hydroxyalkoxy, amino, and (di)( $C_1$ - $C_2$ )alkylamino radicals,

- R<sub>5</sub>, R<sub>6</sub>, R<sub>7</sub> and R<sub>8</sub>, which may be identical or different, are chosen from a hydrogen atom; a chlorine atom; a bromine atom; linear and branched, saturated and unsaturated C<sub>1</sub>-C<sub>8</sub> hydrocarbonaceous chains that can form at least one 3- to 6-membered carbonaceous ring, at least one carbon atom of the carbonaceous chain of which can be replaced by at least one entity chosen from oxygen, nitrogen, and sulphur atoms and SO<sub>2</sub> groups, and the carbon atoms of which can, independently of one another, be substituted by at least one halogen atom; with the proviso that R<sub>5</sub>, R<sub>6</sub>, R<sub>7</sub> and R<sub>8</sub> do not comprise a peroxide bond or a diazo or nitroso radical,
- R<sub>3</sub>, R<sub>4</sub>, R<sub>10</sub>, R<sub>11</sub>, R<sub>13</sub>, R<sub>14</sub> and R<sub>15</sub>, which may be identical or different, are chosen from a hydrogen atom and linear and branched, saturated and unsaturated C<sub>1</sub>-C<sub>16</sub> hydrocarbonaceous chains that can form at least one 3- to 6-membered carbonaceous ring, one or more carbon atoms of the carbonaceous chain of which can be replaced by at least one entity chosen from oxygen, nitrogen, and sulphur atoms, and SO<sub>2</sub> groups, and the carbon atoms of which can, independently of one another, be substituted by at least one halogen atom; with the proviso that R<sub>3</sub>, R<sub>4</sub>, R<sub>10</sub>, R<sub>11</sub>, R<sub>13</sub>, R<sub>14</sub> and R<sub>15</sub> do not comprise a peroxide bond or a diazo or nitroso radical,
  - R<sub>4</sub> with R<sub>13</sub> and R<sub>14</sub> with R<sub>15</sub> can form a carbonaceous aromatic ring; and at least one second compartment comprises at least one oxidizing composition.